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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/595,803

05/12/2006

Mark Andrew Rowen

ROWE0101PUSA

6967

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BROOKS KUSHMAN P.C.  
1000 TOWN CENTER  
TWENTY-SECOND FLOOR  
SOUTHFIELD, MI 48075

EXAMINER

FRANK, NOAH S

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/595,803	<b>Applicant(s)</b> ROWEN, MARK ANDREW	
	<b>Examiner</b> NOAH FRANK	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Hovestadt et al. (US 5,453,460).

Considering Claims 1-2: Hovestadt et al. teaches a process for reusing the overspray obtained when spraying water dilutable two-component polyurethane coating compositions by collecting the overspray, reacting the overspray with compounds that are more reactive with isocyanate groups than both water and the compounds containing isocyanate reactive groups, and using the solution or dispersion in a coating composition (Abs). The coating residue can be reconcentrated (extracted) by low pressure evaporation (2:35-45). The recovered overspray can be used in two-component polyurethane coating compositions, with addition of a polyisocyanate as hardener (7:35-40). The dispersion was applied as a two-component polyurethane coating composition (7:35-40).

Considering Claim 3: Hovestadt et al. teaches the isocyanate being based on hexamethylene diisocyanate (7:1-5).

Considering Claim 10: Hovestadt et al. teaches the coating in an aqueous dispersion (Abs), which is inherently a viscous liquid.

Considering Claim 11: Hovestadt et al. teaches adjusting the spray viscosity of the coating by adding water (diluting) (Abs).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 rejected under 35 U.S.C. 103(a) as being unpatentable over Hovestadt et al. (US 5,453,460) in view of Moriarty et al. (US 6,692,670), as evidenced by Rubinate 1840 data sheet.

Considering Claim 4: Hovestadt et al. teaches the basic claimed coating as set forth above.

Hovestadt does not teach the claimed MDI. However, Moriarty et al. teaches polymeric MDI comprising less than 48% diisocyanate (MDI) (3:30-35), specifically Rubinate 1840 (3:15-17). Rubinate 1840, as shown from the Rubinate 1840 data sheet, is a 50:50 mix of 4,4'-diphenylmethane diisocyanate (CAS 101-68-8) and polymeric MDI (CAS 9016-87-9). Hovestadt and Moriarty are combinable because they are from the same field of endeavor, namely isocyanate binders. At the time of the invention a person of ordinary skill in the art would have found it obvious to have used the

polymeric MDI, as taught by Moriarty, in the invention of Hovestadt, as an equivalent alternative isocyanate.

Claims 5-7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hovestadt et al. (US 5,453,460) in view of Patzelt et al. (US 5,766,370).

Considering Claims 5 and 14: Hovestadt et al. teaches a process for reusing the overspray obtained when spraying water dilutable two-component polyurethane coating compositions by collecting the overspray, reacting the overspray with compounds that are more reactive with isocyanate groups than both water and the compounds containing isocyanate reactive groups, and using the solution or dispersion in a coating composition (Abs). The coating residue can be reconcentrated (extracted) by low pressure evaporation (2:35-45). The recovered overspray can be diluted (8:25-30) and used in two-component polyurethane coating compositions, with addition of a polyisocyanate as hardener (reactive to epoxide) (7:35-40). The dispersion was applied as a two-component polyurethane coating composition (7:35-40).

Hovestadt does not teach placing the paint waste stream in a still, separating the solvent, and then extracting the paint residue. However, Patzelt et al. teaches a paint overspray treatment by feeding a spent emulsion into a reaction vessel, the reaction vessel operating under a vacuum and at a temperature sufficient to generate a volatilized organic solvent component (still), and removing residual material remaining in the reaction vessel after volatilizing the organic solvent (4:15-35). Hovestadt and Patzelt are combinable because they are form the same field of endeavor, namely paint

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overspray recovery. At the time of the invention a person of ordinary skill in the art would have found it obvious to have extracted the paint residue, as taught by Patzelt, in the invention of Hovestadt, in order to efficiently remove excess solvent from the paint residue.

Considering Claims 6-7: Hovestadt et al. teaches reacting the isocyanate in an equivalent (stoichiometric) amount to hydroxyl groups (7:55-60).

Claims 8-9 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hovestadt et al. (US 5,453,460) in view of Patzelt et al. (US 5,766,370), as applied to claims 5-7 above, further in view of applicant's admission of prior art.

Considering Claims 8-9 and 13: Hovestadt et al. teaches the basic claimed process as set forth above.

Hovestadt does not teach purifying the residue according to specific gravity before combining with hardening agents and pigments. However, applicant has admitted that it is well known in the art that upon standing, paints will settle out with the heavy pigments falling to the bottom and the clear resin solution sitting on top and that this process can be accelerated using an industrial decanter or centrifuge (high speed rotation) (4:15-25 of instant specification). At the time of the invention a person of ordinary skill in the art would have found it obvious to have removed pigments according to specific gravity, as taught by applicant, followed by addition of the curing agent and new pigments, in order to make a coating of a different color, thereby adapting the claimed method to multiple scenarios.

Claim 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Hovestadt et al. (US 5,453,460), as applied to claims 1-3 and 10-11 above.

Considering Claim 12: Hovestadt et al. teaches the basic claimed process as set forth above. In addition, Hovestadt et al. teaches adjusting the spray viscosity of the coating by adding water (diluting) (Abs).

Hovestadt does not teach the amount of thinning solvent used. However, the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. In re Aller, 105 USPQ 233. MPEP 2144.05 The amount of diluent can be adjusted to obtain a coating of the desired viscosity.

### ***Response to Arguments***

Applicant's arguments filed 6/18/08 have been fully considered but they are not persuasive.

In response to applicant's arguments that Hovestadt does not teach that the paint residue is a viscous liquid at ambient temperature, please see the new rejection as set forth above. In addition, while the overspray of Hovestadt would be a solid if it was directly distilled, Hovestadt teaches reacting the overspray with compounds which are reactive with isocyanate groups (Abs), thereby avoiding hardening the dispersion.

In response to applicant's arguments regarding solvent thinning, please see the new rejection as set forth above.

In response to applicant's arguments regarding the Moriarty reference, please see the new rejection as set forth above.

In response to applicant's arguments regarding Patzelt, while it appears that Patzelt teaches recovering the solvent from a paint residue, the process of separating solvent from a paint residue is the same, whether or not one's goal is to retain the solvent or the residue. In addition, Hovestadt gives motivation to remove solvent from the overspray in order to adjust the spray viscosity (Abs).

In response to applicant's arguments regarding claims 8-9, please see the new rejection as set forth above.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.



***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NOAH FRANK whose telephone number is (571)270-3667. The examiner can normally be reached on M-F 9-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on 571-272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Eashoo, Ph.D./  
Supervisory Patent Examiner, Art Unit 1796  
15-Sep-08

NF  
9-11-08